

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Longshot Oil, LLC
Well Name/Number: New Miami Colony #21-20H
Location: NE NW Section 20 T28N R5W
County: Pondera, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 7 to 12 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to a single horizontal lateral of 6930'MD/2875'TVD in the Sun River Dolomite of the Madison Formation.

Possible H2S gas production: Yes, slight from the Madison Formation.

In/near Class I air quality area: No Class I air quality area, in the area of review.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

- ☒ Air quality permit (AQB review)
- ☐ Gas plants/pipelines available for sour gas
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: No special concerns – using small rig to drill to 6930'MD/2875'TVD, single lateral horizontal well test. If there are existing pipeline for natural gas in the area then gas must be tied into system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system on surface and mainhole. Horizontal lateral will be drilled with freshwater.

High water table: None anticipated.

Surface drainage leads to live water: Yes, nearest drainage is an unnamed ephemeral tributary drainage to the Dry Fork Marias River, about 1/32 of a mile to the northeast from this location.

Water well contamination: No, closest water wells are about 1 mile and further in any direction from this location. This well will drill to 200' with freshwater, set 200' of steel surface casing and cement it to surface to protect surface and ground waters.

Porous/permeable soils: No, sandy bentonitic soils.

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

- ☐ Lined reserve pit
- ☒ Adequate surface casing
- ☐ Berms/dykes, re-routed drainage
- ☐ Closed mud system
- ☐ Off-site disposal of solids/liquids (in approved facility)
- ☐ Other: _____

Comments: 200' of surface casing will be set and cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, no stream drainages will be crossed. Crossing only an ephemeral drainage.

High erosion potential: No, small cut, up to 7.5' and small fill, up to 5.1', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 300'X320' location size required.

Damage to improvements: Slight, surface use is agricultural land.

Conflict with existing land use/values: Slight, surface use is agricultural land.

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Access will be through existing county roads, East Lake County Road. A short access will be built into this location of about 2180' off the county road. Drilling and reserve pit will be unlined earthen pits. Reserve pit and drill pit fluids and cuttings will be allowed to dry in the pits. Once pits are dry, they will be filled with subsoil and the topsoil will be the last cover. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: None nearby. Closest residences are about 1.25 miles to the north, New Miami Hutterite Colony and 1.625 miles southeast of this location.

Possibility of H2S: Slight chance H2S from the Madison Formation.

Size of rig/length of drilling time: Small drilling rig/short 7 to 12 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing and working BOP should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened or endangered are the Piping Plover, Grizzly Bear, Gray Wolf and the Canada Lynx. Candidate species are the Sprague's Pipit, Wolverine and the Whitebark Pine. NH tracker website lists zero (0) species of concern, but lists one (1) potential species of concern: the Hayden's Shrew.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private surface agricultural land. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private surface agricultural land. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns.

Remarks or Special Concerns for this site

Well is a 6930'MD/2875'TVD horizontal Madison Formation test. Note nearby are two(2) water disposal wells into the Madison Formation. Possible issue may exist at a later time. There appears to be vertical separation between the horizontal lateral and the vertical openhole completed disposal well of approximately 100' to 150'. At some time these Madison disposal wells may communicate with the horizontal producer.

Discussion with Mr. Hudak, MBOGC UIC director was satisfied as long as there was no contamination of any freshwater aquifers, by these wells.

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts expected in the drilling of this oil well. Some short term surface impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki _____

(title:) Chief Field Inspector

Date: April 3, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC
website

(Name and Agency)

Pondera County water wells.

(subject discussed)

April 3, 2012

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Pondera County

(subject discussed)

April 3, 2012

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3 mammals and birds T28N R5W

(subject discussed)

April 3, 2012

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____